UTAH STATE

LAND OFFICE

Lease No. 3757

Room 105 Capitol Bldg.
Salt Lake City, Utah

Unit King Oil No. 1

RECEIVED
DEC 17 1953
U. S. OIL & GAS BR.
GEOLOGICAL SURVEY
SALT LAKE CITY, UTAH

SUNDRY NOTICES AND REPORTS ON WELLS

Notice of Intention To		Subsequent Report Of only	
Drill		Water Shut-Off	
Change Plans		Shooting Or Acidizing	
Test Water Shut-Off		Altering Casing	
Re-Drill Or Repair Well		Re-Drilling Or Repair	
Shoot Or Acidize		Abandonment	
Pull Or Alter Casing		Supplementary Well History	
Abandon Well	X		

(Indicate Above By Check Mark Nature Of Report, Notice, Or Other Data)

State Land

November 27, 1953

Well No. 1 is located 635 ft. from N line and 875 ft. from W line of

sec. 32 — NW¼ of Sec. 32 (¼ Sec. and Sec. No.) — 23S (Twp.) — 21 E (Range) — S.L.M. (Meridian)

Salt Valley (Field) — Grand County, Utah (County or Subdivision)

The elevation of the derrick floor above sea level is 4870 ft.

DETAILS OF WORK

(State names of and expected depths of objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points; and all other important proposed work)

Well was shot at 7:53 A.M., Nov. 25, 1953 with 308 qts. of I.C.C.-14 solidified nitroglycerine. Shot was packed with approx. 20 ft. of gravel. Zone shot was the sandstone between 3294 and 3358, which showed petroleum by oil and gas cut mud- odor- and ultra-violet flourescence. The shot cleaned the hole out to 3349. Subsequent testing and cleaning out revealed no entry of petroleum into the hole. This zone carries staining and slight saturation but lacks both porosity and permeability to produce any oil.

The well is abandoned, however, casing will be left and the hole capped, temporarily, pending negotiations for another company to drill deeper. Final abandonment and plugging will be accomplished later.

Company King Oil Company
Address 315 Ness Building
28 West 2nd South
Salt Lake City, Utah

By JAMES M. RUBY
Title Geologist

(Add Supplemental Sheet If Necessary)

DAILY OPERATIONAL REPORT

Oct. ---- Drilled [illegible] ft. to [illegible]
Hole still bad. Filled hole up with rock from 1580 ft. and drilled out.

Oct. 10 ---- Drilled 1608 ft. to 1625 ft.
Hole still bad. Preparing to shoot bad section with nitroglycerine.

Oct. 11 ---- Drilled 1625 ft. to 1650 ft.
Shot went off at 4:45 A.M. (250 quarts of nitroglycerine). Shot zone from 1575 ft. to 1630 ft. Cleaned out and drilled to 1650 ft.

Oct. 12 ---- Drilled 1650 ft. to 1690 ft.
Hole caving some. Thin mud developing or coming into hole.

Oct. 13 ---- Drilled 1690 ft. to 1705 ft.
Hole caving. Mud still coming in making drilling slow and difficult.
Deviation test at 1545 ft. is 2 degrees.

Oct. 14 ---- Drilled 1705 ft. to 1725 ft.
Hole still caving and muddy. Deviation test at 1600 ft. is 2 degrees.

Oct. 15 ---- Drilled 1725 ft. to 1760 ft.

Oct. 16 ---- Drilled 1760 ft. to 1785 ft.

Hole has been caving for several days. Apparently the gray shale absorbs drilling water after it is first dumped. Then, as drilling proceeds, this soggy shale caves in -- making a sudden deluge of mud. Indications are that there is not any mud coming in from the old hole, nor is there any water coming in the hole from above. What appears to be coming in from current section is the absorbed drilling fluid coming back in with the mud.

Ran in 1 barrel of Linco Cave-seal and washed it down with 1 barrel of water. This reduced the caving and muddy condition considerably.

Oct. 17 ---- Drilled 1785 ft. to 1860 ft.
Using spiral-star bit.
Deviation test at 1700 ft. is plus or minus 1 degree.

Oct. 18 ---- Drilled 1860 ft. to 1915 ft.

Oct. 19 ---- Drilled 1915 ft. to 1980 ft.
Hole caving, black and gray shale from above, but this is not causing any serious difficulty in drilling.

Oct. 20 ---- Drilled 1980 ft. to 2055 ft.

Oct. 21 ---- Drilled 2055 ft. to 2125 ft.

Oct. 22 ---- Drilled 2125 ft. to 2180 ft.

Oct. 23 ---- Drilled 2180 ft. to 2235 ft.
Deviation test at 2200 ft. equals 3 degrees.

Oct. 24 ---- Drilled 2235 ft. to 2290 ft.

Oct. 25 ---- Drilled 2290 ft. to 2355 ft.

Oct. 26 ----- Drilled 2355 ft. to 2405 ft.

Oct. 27 ---- Drilled 2405 ft. to 2455 ft.

28 -- [illegible]
In the hole from [illegible]0 ft. to [illegible] ft. [illegible] encountered. Odor was detected and visible waves of gas could be seen above the drilling nipple when the bailer was being pulled. This gas probably comes from the [illegible], [illegible] this [illegible] casing [illegible].

Oct. 29 ---- Drilled [illegible] ft. to [illegible] ft.

Oct. 30 ---- Drilled 26[illegible] ft. to [illegible] ft.

Oct. 31 ---- Drilled [illegible] ft. to [illegible] ft.

Nov. 1 ---- Drilled 2680 ft. to 2740 ft.

Nov. 2 ---- Drilled 2740 ft. to 2815 ft.

Nov. 3 ---- Drilled 2815 ft. to 2890 ft.

Nov. 4 ---- Drilled 2890 ft. to 2970 ft.

Nov. 5 ---- Drilled 2970 ft. to 3045 ft.

Nov. 6 ---- Drilled 3045 ft. to 3105 ft.

Nov. 7 ---- Drilled 3105 ft. to 3160 ft.

Nov. 8 ---- Drilled 3160 ft. to 3210 ft.

Nov. 9 ---- Drilled 3210 ft. to 3285 ft.

Nov. 10 ---- Drilled 3285 ft. to 3317 ft.

Nov. 11 ---- Drilled 3317 ft. to 3344 ft.

Nov. 12 ---- Drilled 3344 ft. to 3352 ft.

Nov. 13 ---- Reamed hole and cleaned out to 3352 ft. Hole caving.

Nov. 14 ---- Drilled 3352 ft. to 3385 ft.

Nov. 15 ---- Drilled 3385 ft. to 3450 ft.

Nov. 16 ---- Drilled 3450 ft. to 3505 ft.

Nov. 17 ---- Drilled 3505 ft. to 3550 ft.
Hole bridged at 1800 ft. Cleaning out bridge.

Nov. 18 ---- Cleaning out bridge. Lost tools--fished out.

Nov. 19 ---- Cleaning out, drilling on bridge.

Nov. 20 ---- Cleaning out bridge.

Nov. 21 ---- Drilled out bridge. Changed drilling lines.

Nov. 22 ---- Cleaning out. Tools go to 3154 ft. Bailer goes to 1870 ft.

Nov. 23 ---- Cleaning out to 3360 ft. Hole caving.

Nov. 24 ---- Cleaned out. Bailed hole dry.
Ran 308 qts. of I.C.C.-14 solidified nitroglycerine. Bottom of shot 3368 ft. -- top 3291 ft. Umbrella on top. Shot packed with approx. 20 ft. of gravel. Shot set to go off at 0800 25th November.

Nov. 25 ---- Shot detonated at 0753.
Bridge held for a moment, putting good pressure on sand stone section between 3294 and 3358. Hole cleaned itself out to approximately 3349. Test showed no oil or gas entering hole.

Proceeded to clean out to PTD (3550) and to give time for any entry of oil to take place.

POOR COPY

DAILY OPERATIONAL REPORT

1 C R

[illegible] 195[illegible]

Sept. 13 to
Sept. 20 ---- Moving in and rigging up. Contractor, Ferrel Bros., Farmington, New Mexico. Rig, 85-A Bucyrus-Erie Spudder.
Laid on location casing purchased from Glen M. Ruby, Operator: 941.7[illegible] ft. of 10 3/4", 40.5 #, J-55 and 20 ft. of 13 3/8", 48#, H-40 without threads or collar.

Sept. 21 ---- Kin[illegible] #1 No. 1 spudded at 10:[illegible] A.M.
William E. Huyler, Pres. and "Rocky" Jerman, Supt. present.
Drilled to [illegible] ft. in sand-gravel-shale-gypsum series.

Sept. 22 ---- Surface casing set at depth of 53 ft.
Hole drilled ahead with 12¼" bit.
Drilled 50 ft. to 165 ft.

Sept. 23 ---- Drilled 165 ft. to 265 ft.

Sept. 24 ---- Drilled 265 ft. to 334 ft.

Sept. 25 ---- Drilled 334 ft. to 415 ft.

Sept. 26 ---- Drilled 415 ft. to 500 ft.

Sept. 27 ---- Drilled 500 ft. to 580 ft.

Sept. 28 ---- Drilled 580 ft. to 650 ft.

Sept. 29 ---- Drilled 650 ft. to 725 ft.

Sept. 30 ---- Drilled 725 ft. to 795 ft.

Oct. 1 ---- Drilled 795 ft. to 853 ft.
Picked up water between 810' and 823'. Making approximately ½ to 1 barrel per hour. Salt water.
Lost tools, fished out.

Oct. 2 ---- Drilled 853 ft. to 868 ft. Hole caving some. Rigged up to run casing (10 3/4", 40.5#, J-55). Starting casing run at 6:30 A.M. Shoe welded (straight shoe). Dumped 5 barrels of thick Wyo-Jel mud. Ran 28 full joints = 858.44 ft. plus 10 ft. of 29th -- total 868 ft. Casing landed at 868 ft. in shale at 10:30 A.M.

Casing run:

1.	32.27 (shoe Joint)	11.	26.08	21.	31.70
2.	26.32	12.	32.02	22.	31.70
3.	31.86	13.	31.90	23.	30.90
4.	32.00	14.	30.49	24.	30.60
5.	31.20	15.	31.52	25.	30.10
6.	31.75	16.	31.68	26.	31.30
7.	27.32	17.	31.70	27.	31.25
8.	27.80	18.	31.95	28.	31.93
9.	26.53	19.	32.30	29.	10.00
10.	31.48	20.	30.79		868.44 ft. TOTAL

Drilled ahead with 10" bit to 915 ft.
Water successfully cased off by formation shut-off.

Oct. 3 ---- Drilled 915 ft. to 1060 ft.

Oct. 4 ---- Drilled 1060 ft. to 1235 ft.

Oct. 5 ---- Drilled 1235 ft. to 1390 ft.

Oct. 6 ---- Drilled 1390 ft. to 1495 ft.

Oct. 7 ---- Drilled 1495 ft. to 1565 ft.

Oct. 8 ---- Drilled 1565 ft. to 1600 ft.
Hole crooked. Filled up with rock from 1565 ft. back to 1545 ft. and drilled out.

DAILY OPERATIONAL REPORT

Nov. 26 ---- Clearing out below 3400 ft.
No showing of oil in any amount entering hole. Hole caving.
Cleaning out is slow and dangerous.

Since approximately 200 ft. of salt was drilled below the zone showing ultra-violet flourescence this, and the sequence of breaks in the salt, indicates definitely that the zone shot correlates with the horizon in which oil was encountered in Balsley No. 1. Further operations would be expensive and futile.

The decision was made and the well was abandoned as of midnight 26th November 1953.

See written sample log for summary.

The above record of operations was compiled for King Oil Company by:

JAMES M. RUBY

SAMPLE LOG

Location: [illegible] ft. South and 575 ft. East of the northwest corner of Section 32
Twp. [illegible], Range 21 E., S.L.M., Grand County, Utah
Elevation: At derrick floor [illegible] ft.
Date Spudded: 21st September [illegible] at 10:[illegible] A.M.
Casing Record:
13 3/8", [illegible] lb., [illegible] casing set at 53 ft.
[illegible]", 32 lb., [illegible] casing set at [illegible]68 ft.

Remarks: Well tested, shot with nitroglycerine, and after failure to achieve production, was abandoned 26th November 1953. See summary at the end of this log for further remarks.

Depth	Description
0 - 20	Sand, gravel, gypsum. (Alluvium). Spudding sample.
20 - 40	Shale-gray, gypsum, some white-chalky limestone. Cavings from above of sand and gravel.
40 - 50	Sandstone - light gray-brown, with yellow tinge, very fine grained, silty, micaceous, calcite cement.
50 - 60	Sandstone - as above 90%. Gypsum and cavings 10%.
60 - 69	50% sandstone - as above. 50% Limestone - gray, silty, with gypsum veins and inclusions.
69 - 76	30% limestone - as above, except, somewhat sand and some brown color. 70% gypsum.
76 - 86	60% gypsum and anhydrite. 20% sandstone - as above. 20% limestone - as above. Some cavings. Trace of black shale.
86 - 91	Gypsum with stringers of gray limestone and gray-brown, calcareous, silty, sandy shale.
91 - 96	Gypsum and anhydrite. 10% cavings.
96 - 103	Gypsum and anhydrite. 20% or more of cavings of sand and limestone from above.
103 - 112	50% gypsum - with sand stringers. 40% limestone - gray, dirty, silty, sandy. 10% shale - black, calcareous, fissile in part.
112 - 125	10% gypsum - as above. 40% shale - gray, silty, highly calcareous. 50% shale - black, calcareous.
125 - 135	10% shale - black, as above. 90% siltstone - gray (light), calcareous, soft.
135 - 150	80% siltstone - as above, with some gypsum veins. 20% shale - gray, calcareous, silty, laminated.
150 - 162	70% siltstone - as last above. 30% shale - black-blue, calcareous, laminated in part.
162 - 177	Siltstone - as last above.
177 - 187	50% siltstone to silty, sandy shale - gray, calcareous, with some [illegible] 50% mudstone or ooze - gray, silty, highly calcareous.

75% [illegible] - [illegible] calcareous, with considerable gypsum.
25% [illegible] - [illegible] to blue-black, calcareous, slightly silty.

192 - 205 30% gypsum.
30% shale - gray and blue-black, as above.
40% siltstone - as above.
All interbedded and somewhat laminated.

205 - 214 As last above with considerable gray, calcareous ooze or mudstone.

214 - 220 Siltstone to silty shale - gray, calcareous, with considerable gypsum and gray, calcareous ooze.

220 - 226 Siltstone to silty shale - gray, calcareous, with veins of gypsum.

226 - 242 Shale - gray to blue-black, silty in part, calcareous, with some gypsum and thinly laminated in part.

242 - 248 As above.

248 - 255 As above, with 30% gypsum.

255 - 265 As above, with 50% gypsum.

265- 269 As above, with 40% gypsum.

269 - 297 As above, less gypsum.

297 - 308 As above, with traces of pyrite.

308 - 322 75% shale - black, calcareous, silty in part, traces of pyrite. Thinly laminated in part.
25% shale and gypsum - shale gray as above.

322 - 330 Shale - black, calcareous, somewhat silty, thinly laminated in part to fissile, veins filled with gypsum. Traces of pyrite. Some gray shale as above.

330 - 340 As above, more gray shale and more gypsum.

340 - 345 As above, more gray shale in proportion.

345 - 359 Shale - gray, silty, calcareous, muddy, with pyrite. Small amounts of black shale and gypsum.

359 - 365 As above, slightly more black shale.

365 - 371 Shale - gray, silty, frew veins of gypsum. (Sample contains much chalcedony and sand rock thrown in hole to facilitate dumping bailer).

371 - 381 Shale - as above, with some black shale.

381 - 435 Shale - gray, silty, sandy in part, calcareous, with veins of gypsum.

435 - 441 Shale - gray to black, silty, calcareous, black portions thinly laminated.

441 - 447 Shale - as above, but muddy and with some gypsum.

447 - 457 Shale - black as last above with 30% gypsum.

457 - 472 40% shale - gray to siltstone - gray.
30% shale - black, as above.
30% gypsum.

472 - 477 As above, except 40% black shale and 30% gray shale.

477 - 485 75% shale - black, calcareous, thinly laminated, with some gray shale.
25% gypsum.

[illegible] Black shale - as above.
[illegible] Gray shale - as above.
With veins of gypsum.

492 - 496 50% black shale.
30% gypsum.
20% gray shale.

496 - 501 70% gypsum.
20% black shale, gray shale, and gray siltstone.

501 - 507 50% gypsum.
50% black shale, with some gray shale.

507 - 515 As above, but more gray shale, and the gypsum is dirty gray to white.

515 - 521 Shale - black, some gray, silty in part, calcareous, and [illegible]

521 - 531 Siltstone - gray, calcareous, with some gray shale-[illegible]
Traces of pyrite.

531 - 545 As above.

545 - 553 Shale - gray and black, with 30% gypsum.

553 - 559 As above, with 50% gypsum.

559 - 575 75% gypsum.
25% Shale - gray and black, silty, sandy in part.

575 - 582 75% shale - black, silty, laminated, calcareous, [illegible]
25% gypsum.

582 - 588 As above, but shales are very muddy.

588 - 595 Same as 575 to 582.

595 - 607 Same as 582 to 588.

607 to 623 Shale - Black, silty, laminated in part, calcareous, [illegible]
gray shale and gypsum.

623 - 636 As above, but more gypsum and a few brown muddy [illegible]

636 - 650 50% gypsum.
50% shale - black and gray as above series.

650 - 655 As above, but very muddy and drilled up.

655- 663 90% gypsum.
10% shale - black and gray as above.

663 - 670 90% [illegible] shale- black, silty, laminated, [illegible]
10% gypsum.

670 - 678 As above, but 70% gypsum and 30% shale.

678 - 685 As above, but 70% shale and 30% gypsum.

685 - 696 As above, with traces of pyrite.

696 - 713 Shale - black, silty in part, laminated, calcareous.

713- 719 80% shale - black and gray, silty, calcareous, muddy in part.
20% gypsum.

719 - 725 80% gypsum-anhydrite - white to gray, dirty in part.
20% shale - black and gray as above.

725 - 735 Shale - black and gray as above with 10% gypsum.

73[illegible] - 745 As above, but sample contains white to gray chalcedony [illegible] hole to facilitate [illegible] bailer.

745 - 768 80% shale - black (& gray, silty), calcareous.
20% gypsum - portions of an pyrite.

768 - 775 60% shale - [illegible] gray as above section, with some gypsum.
40% sandstone - gray, calcareous, very fine grain, silty, [illegible] pyritic in part.

775 - 781 As above, but muddy.

781 - 794 50% shale - [illegible] black, calcareous, muddy.
50% sandstone - as above.

794 - 810 Mudstone or shale - gray, soft, sticky, with a mixture of [illegible] black shale, gypsum, and sand.

810 - 823 Shale - dark gray to black, silty in part, laminated in part, interbedded with gypsum and stringers of [illegible]. Sandstone is calcareous, very fine grain, with [illegible] carbonaceous silt. Sandstone and shale [illegible]. Section carries water - ½ to 1 barrel per hour. [illegible] shows some porosity. Water is salty and has sulphur [illegible] when first bailed.

823 - 836 Mixture - muddy (with finely ground gypsum), of black [illegible] shale, and fine sandstone as above.

836 - 853 50% gypsum - clear, crystalline.
50% black shale, grey shale, and fine sandstone as above [illegible] siltstone.

853 - 868 20% gypsum and black shale with sandstone as above.
80% shale - gray, fine, calcareous, with stringers and [illegible] salt (halite).

868 - 880 Siltstone - light gray with brownish tinge, calcareous, [illegible] amounts of black shale, pyrite, and gypsum.

880 - 897 Salt - halite, clear-colorless, crystalline in part.

897 - 930 Salt - as above, with some rusty stain and pieces of [illegible]

930 - 945 Salt - with brownish stain.

945 - 1000 Salt - halite, clear-colorless.

1000-1062 Salt - with slight orange coloration.

1062-1105 Salt - with slight off-white coloration.

1105-1118 Salt - halite, clear-colorless.

1118-1140 Salt - halite, clear-colorless, with 10% black shale. Sample has strong petroleum odor. Shale is soft and silty. Traces of ultra-violet flourescence. No other indications of oil.

1140-1150 Salt - halite, clear-colorless, with traces of black shale.

1150-1170 Salt - halite, clear-colorless, with 5% black shale. Petroleum odor. Shale apparently carries small amount of oil -- shows some ultra-violet flourescence.

1170-1192 As above - dirtier, less odor, less u/v flourescence.

1192-1235 Salt - slightly dirty.

1235-1300 Salt - halite, clear-colorless.

1390-1409 Salt, halite- clear-colorless.

1409-1418 Shale - black, [illegible] calcareous, silty and sandy in part, pyrite in part, with [illegible] gray-brown, calcareous, silty, very fine grained sandstone. [illegible] calcite vein filling.

1418-1425 Shale - as last above, but more sandstone and some salt. Traces of orange tinted salt vein filling. Shale fissile in part. Sample indicates some contortion in section.

1425-1435 Salt - [illegible] gray, interbedded and mixed with black shale, sand, gray shale, pyrite and silt.

1435-1461 Shale- black, calcareous, laminated to fissile, gray-brown sand stringers. [illegible] salt and fine grained texture. Some pyrite.

1461-1466 Shale - as above, with sandstone grading to siltstone and many very fine varigations or laminae of gray-brown sandstone to siltstone. Trace of ultra-violet flourescence.

1466-1480 Sand - very fine, gray, interbedded with black shale and salt. Some pyrite.

1480-1494 Mixture - gray mud, salt (with some yellow to orange tint), sand, black shale, and gray shale.

1494-1505 Gray, muddy silt. Sticky and putty-like.

1505-1525 Mixture - as 1480 to 1494 with considerable salt.

1525-1531 Shale - gray to black, silty in part, fissile in part, varigated with brown sand stringers in part, carbonaceous in part, some gray sandstone.

1531-1540 20% - Shale as last above.
30% - Sandstone - gray-brown, fine to very fine, micaceous, slightly calcareous, with much pyrite in part.
50% - Anhydrite, partially hydrated.

1540-1565 As last above, interbedded with salt.

1565-1570 Sample too contaminated with rock thrown in to straighten hole to determine content.

1570-1590 Shale - black, soft, with much foreign rock thrown in hole.

1590-1622 Shale - gray and black, some cavings, much foreign rock and wire line thrown in hole.

1622-1638 Shale - black and gray, some pyrite, some salt. (Salt and pyrite distributed in part as vein filling). Small amount of foreign rock.

1638-1657 As above, only more gray in color.

1657-1668 Shale - gray, calcareous, soft, silty. Tends to become muddy. Some salt and foreign matter.

1668-1675 Shale - as last above, less muddy.

1675-1696 Shale - as above, muddy, with some cavings of gray shale and traces of black shale.

1696-1705 Shale - gray, calcareous, silty, soft. Considerable cavings from gray shale zone above.

1705-1750 Shale - as last above. Still caving.

1750-1762 Shale - as last above, with gray and black shale cavings.

1762-1775 Shale - gray, calcareous, soft, silty, sandy in part. Cavings of gray and some black shale.

1775-1788 Shale - gray, calcareous, silty, sandy in part. Contains vein filling of salt, some of which is orange color.

1788-1805 Shale - gray and black, calcareous, silty, muddy. Some cavings of gray shale.

1805-1833 Shale - gray to dark gray, calcareous, laminated, silty, soft, with clear-colorless to orange-colored salt vein filling.

1833-1840 60% shale as last above.
40% salt, halite, clear-colorless, with 2% to 3% probably KCl which has taken up some iron compound to give it an orange color.
Shale and salt probably interbedded.

1840-1874 As above, but 60% salt and 40% shale. Some of the shale is cavings.

1874-1879 Shale - black, calcareous, silty, with 10% salt interbedded. Salt as above with 5% orange color.

1879-1884 Anhydrite - white to dark gray, finely crystalline. 10% cavings of salt and shale.

1884-1907 Shale - black, calcareous, soft. 50% cavings of shale - gray and black.

1907-1918 Shale - gray and black, interbedded with dirty salt.
Some cavings.

1918-1928 As last above, with 80% cavings.

1928-1958 Shale - gray to black, interbedded with salt and some sand.
Pyrite in part.
Some salt has orange color.

1958-1970 60% salt.
40% shale - gray to black, part of which is cave.

1970-1999 Shale - gray and black, interbedded with dirty salt. Considerable cavings of gray shale.

1999-2022 Salt - halite, clear-colorless, with traces of orange tinge.
20% cavings of gray and black shale.

2022-2029 Shale - gray to black. 10% salt - some as vein filling, traces of orange tinge.

2029-2057 Salt - halite, with 10% gray shale cavings.

2057-2072 Salt - halite, with 40% to 50% gray shale cavings.

2072-2080 Salt - halite, clear-colorless, with 10% pink to orange tinge.
10% gray shale cavings.

2080-2095 10% salt.
90% shale - black, silty in part, some pyrite and salt vein filling.

2095-2200 Salt - halite, colorless, clear to frosted, traces of pink to orange tinge, some gray and black shale cavings.

2200-2247 Salt - sample contains black and gray shale cavings and pieces of iron from dump stick which was lost and drilled up.

2247-2267 Salt - appears frosted, buff to orange and pink, traces of iron from dump stick.

2267-2290 Salt - as above, but a bit less intense coloring.

2290-2314 90% salt - clear-colorless to orange and pink, some dirty gray.
10% shale - black.

2314-2335 50% salt - somewhat dirty, clouded or frosted, tinted - buff, pink, orange.
50% shale - gray, soft, silty, appears to be interbedded with salt.

2335-2365 Salt - halite, cloudy, tinted buff to pinkish and orange. Considerable gray shale cavings.

2365-2405 Salt - as last above, with varying amounts of gray shale cavings.

2405-2411 40% salt - halite, somewhat cloudy to frosted, colorless to stained -- buff, pinkish to orange.
60% shale - black, soft, silty in part.

2411-2435 10% shale - black, soft, silty.
90% salt - halite, clear-colorless to cloudy and tinted pinkish and orange. Portions dirty, gray, opaque.

2435-2444 50% salt and 50% shale, as last above.

2444-2455 Salt - halite, clear-colorless. Traces of pink to orange tint and small amounts of gray and black shale cavings.

2455-2464 Salt - halite, clear-colorless, with traces of pinkish to orange tint, and portions which are dirty-gray-opaque.

2464-2479 Black shale and salt - interbedded. Shale is soft, silty in part, contains pyrite. Salt is contaminated and dirty, crystalline to granular, clear to gray, pinkish, orange, and brown.

2479-2490 Black shale and salt - interbedded. Salt dirty. Salt and shale intricately inter-mixed.

2490-2503 40% black shale and salt as above, with some soft gray shale.
60% sandstone - brown, very fine to fine grained, slightly calcareous, slight some porosity, considerable pyrite.
Note: Showing of gas encountered in this zone. Odor detected and visible waves of gas could be seen when pulling bailer.

2503-2510 As above, more salt.

2510-2525 Shale - mostly gray-soft, some black, with salt -- clear-colorless to clouded and dirty gray.

2525-2532 Shale - black, soft, sandy in part, pyrite in part.

2532-2557 50% shale - as above.)
50% salt.) probably interbedded.

2557-2587 Salt - halite, clear-colorless, with some orange coloration.
10% black shale cave.

2587-2596 60% salt - halite, clear-colorless, with some orange coloration.
40% shale - gray to black, soft.

2596-2620 Salt - halite, clear-colorless, with some orange coloratio , and small amounts of black and gray shale.

2620-2631 Salt - halite, clear-colorless, with tinges of orange.

2631-2643 Salt - halite, clear-colorless to white and frosted, 30% gray and black shale.

2643-2657 Salt and shale as last above.

2657-2673 70% salt - halite, clear-colorless, with some orange coloration.
30% anhydrite - gray, fine crystalline.

2673-2688 Salt and anhydrite - as above, with considerable gray and black shale cave.

2688-2703 60% salt - halite, clear-colorless, with orange tinges.
40% shale - gray to black, soft, some anhydrite.

2703-2734 Salt - halite, clear-colorless to white and frosted, traces of orange coloration.

2734-2743 60% salt - as last above.
40% shale - gray to black, probably cave.

2743-2762 Salt - halite, as above, with some gray shale cave.

2762-2819 Salt - halite, clear-colorless, with tinges of orange.

2819-2834 Salt - halite, clear-colorless, to white-frosted and brownish stained, tinges of orange, some gray shale cave.

2834-2840 Salt - halite, clear-colorless, with considerable orange coloration.

2840-2895 50% salt - as last above.
50% shale - black, soft, salty in part.

2895-2973 Salt - halite, clear-colorless, with traces of orange coloration.

2973-2995 Shale - dark gray to black, soft, pyrite in part, contains some salt.

2995-3025 50% shale - dark gray to black, soft, some pyrite, laminated and brownish in part.
40% salt - halite, clear-colorless.
10% anhydrite - gray, with some sugary gypsum.

3025-3046 90% salt - halite.
10% shale - black, soft, odor of oil, traces of ultra-violet flouresecence.

3046-3055 Salt and shale - as last above. Probably interbedded.
Trace of ultra-violet flouresecence.

3055-3061 Salt and shale - as last above. Salt granular and gray in part, some pyrite in the shale. Trace of ultra-violet flouresecence.

3061-3074 Salt and shale - as last above. Trace of ultra-violet flouresecence.

3074-3084 20% salt and shale - as last above.
80% salt - halite, clear-colorless, trace of ultra-violet flouresecence.

3084-3111 Salt - halite, clear-colorless to gray, dirty granular and with tinges of orange coloration, 10% black, soft shale.

3111-3137 Salt - halite, clear-colorless to gray, dirty granular, 10% black and gray shale.

3137-3172- Salt - as last above.

3172-3210 Salt - halite, clear-colorless, with minor black and gray shale.

3210-3220 Salt - sample is mostly gray shale cave.

3220-3249 Salt - halite, clear-colorless, with traces of orange coloration.

3249-3261 Salt - as last above.

3261-3286 Salt - halite, clear-colorless to dirty, gray [illegible], and gray and black shale (possibly cave)

3286-3294 Salt - [illegible], with black [illegible], gray shale, and sandy shale to sandstone.

3294-3296 40% - mixture as above.
60% - represents this 2 ft. section:
Sandstone - [illegible], very fine grained, slightly [illegible] friable, slight to fair porosity in part, [illegible] Has good odor and [illegible] 50% to 100% [illegible] fluorescence.

[illegible] Sample has strong odor of gas and drilling mud was oil and gas cut. Bailer [illegible] at [illegible] to the hole.

3296-3317 Sandstone - light gray, very fine to fine grained, slightly [illegible] slightly micaceous, shows fair porosity [illegible], friable, shows 50% (plus or minus) ultra-violet fluorescence. Sample contains some gray and [illegible] shale [illegible] salt — [illegible]. No other oil or gas shows [illegible] This section drills as quickly as salt.

3317-3325 Sandstone - as last above.

3325-3334 Sandstone - as last above, grading to soft-gray-sandy shale, [illegible] black shale cave. 0% to 10% ultra-violet fl[illegible]

3334-3350 Sandstone - gray, very fine grained, silty, slightly micaceous, calcareous, grading to siltstone and shale. Some [illegible] cave. Negligible ultra-violet flourescence.

3350-3352 Sandstone - light gray to brownish-black, very fine to fine [illegible] calcareous and micaceous, shows some porosity, grading to dark brown to black silty-sandy-calcareous-micaceous shale and gray-sandy shale. Sandstone shows good ultra-violet fluorescence.

3352-3358 Sandstone - as above, grading to gray-sandy shale and fine grained, somewhat porous, brown stained, silty, micaceous, calcareous sandstone and shale.

3358-3440 Salt - halite, with considerable cave in part.

3440 -3478 Salt - halite, slight buff to orange coloration.

3478-3550 Salt - halite, slight buff or orange coloration. Minor shale cavings from above.

TD —— 3550 ft.

NOTE: At 9:53 A.M., 25 November 1953 the zone from 3291 ft. to 3368 ft. was shot with 308 qts. of I.C.C.-14, solidified nitroglycerine. The hole was bailed dry and the shot packed with approximately 20 ft. of gravel on top of the umbrella. The shot bridge held for a moment, putting good pressure on the sandstone section between 3294 and 3358. The shot cleaned the hole out to 3149. Bailing failed to show any entry of oil or gas into the hole. The hole was cleaned out to below 3400, and 33 hours later there was still no showing of oil or gas.

The well was abandoned at midnight 26 November 1953.

SUMMARY

King Oil No. 1 was drilled in a diligent and workmanlike manner, and every effort was made to produce oil from the zone which correlates with the zone in which oil was encountered in Balsley No. 1 some 65 ft. away. Being drilled with cable tools, the hole was open and any petroleum found had free entry into the hole, depending upon the ability of the formation to give it up. In addition, the zone which correlates with the producing zone in the Balsley well was given an adequate shot of nitroglycerine in order to induce any possible production.

Drilling samples were collected for every foot of the hole and they were carefully studied under a binocular microscope. The log of Balsley No. 1, as filed with the State Land Office, was carefully compared and every attempt at correlation between the two wells was made. The Balsley log was rather brief and seemed to be more of a driller's log than a geologist's log. Correlation between the two wells, taking into account the differences in sample description, was close down to the top of the salt at 880 ft. Below this depth only the sequence in the breaks in the salt gave any correlation. The breaks were encountered at different depths and varied considerably as to thickness.

The break at the expected producing horizon was encountered 59 ft. higher in the King Oil No. 1, and was only 68 ft. thick as compared with a 151 ft. break in the Balsley well. In addition, this section showed a radical variation in lithology between the two wells. In Balsley No. 1 a series of black shale, conglomerate, and black limestone was described; while in King Oil No. 1 this strata was made up of a very fine grained, gray sandstone, which graded to a siltstone and shale.

A comparison of the logs of the two wells doesnot indicate that faulting is the direct or main cause of the differences between them, although the Salt Valley anticline is badly faulted and broken. The area of the valley where King Oil No. 1 was drilled is one in which considerable salt flowage has taken place. Although the surface in the immediate are reveals little of geological significance, it is logical to assume that contortion due to salt flowage combined with faulting nearby has produced a highly variable system of bedding.

The oil found in Balsley No. 1 undoubtedly represents an isolate and unusual accumulation, and a comparison of the two wells illustrates the hazardous nature of exploration in a structure such as this.

[redacted]

NUMBER	LOCATION	LAND STATUS	OPERATOR AND WELL NUMBER	FIELD OR AREA	COMPLETED	ELEVATION	GEOLOGIC FORMATIONS SURFACE	GEOLOGIC FORMATIONS BOTTOM	TOPS: DEPTH IN FEET FROM SURFACE	REMARKS CONCERNING PRODUCING HORIZONS OR SHOWS	TOTAL DEPTH	WELL STATUS
10-74	W NWNE 16-22S19E	S	Utah Drilling & Development Co: #1	Crescent	10-?-45	4729	Mancos	Morrison		Oil show Jm 1055-80'.	1,215	Abd
10-75	NENENE 16-22S19E	S	Reeder Corp. #1	Salt Valley	12?-?-41	4750?	Mancos	?			1,426	Abd
10-76	SESESW 20-22S19E	Pu	Grand Pyramid Oil Inc. #1	Crescent	7-?-53	4630	Mancos	?	Kd 1430'.		1,430	Abd
10-77	NWSE 23-22S19E	Pu	Big Six Oil Co. #1	Salt Valley	12-?-41	4670	Mancos	Morrison?			1,130	DSI
10-78	SESE 9-22S20E	Pu	Raddatz-Vogel-Travis #1	Thompson	10-3-25	4830	Mancos	Morrison			1,450	Abd
10-79	NWNE 21-22S20E	Pu	Hope Syndicate #1	Thompson	10-22-25	5250	Mancos	Morrison			1,400	Abd
10-80	NWNW 33-22S22E	Pu	Utah Southern Oil Co. #1	Cisco	4-?-37	4785	Morrison	Hermosa		Water well temperatures at following depths: 60° F, 100'; 66.6°, 1000'; 76.1°, 2000'; 86.8°, 3000'; 96.5°, 4000'; 106.9°, 4800'.	6,715	Abd
10-81	SESE 6-22S23E	Pu	P. D. Jones #1	Saleratus Creek	1900	4600	Mancos	Morrison		No shows of oil or gas.	1,800	P&A
10-82	NWNWNE 25-23S18E	Pu	British-American Petroleum Co. #1	Ten Mile Wash	1912	4800?	Morrison	Entrada		Water at 350'.	530	Abd
10-83	NWNW 36-23S18E	S	W. P. Whisnant, et al #1	Ten Mile Wash	12-23-43	?	Mancos	Wingate			1,136	P&A
10-84	SESE 18-23S19E	Pu	Hagen #1	Ten Mile Wash	1913	4800?	Mancos	Morrison		Fresh water at 425', salt water 600' and 870', showing of oil 910'.	920	Abd
10-85	NWSW 26-23S19E	Pu	Moab Oil Co. #1	Ten Mile Wash	1912	4800?	Mancos	Mancos			700	Abd
10-86	SWSENW 2-23S20E	S	Pure Oil Co. #1	Northeast Salt Valley	2-4-49	5242	San Rafael Group	Paradox	Jw 1275', Rc 1565', Rsh 1980', Rm 2060', Cpp 2480', Salt 2780'.	Schlumberger run at 1385'.	3,036	P&A
10-87	SESE 5-23S20E	Pu	Western Allies #1	Salt Valley	1919	?	Jurassic	Paradox		Show of oil and gas, salt and epsomite at 775-825', small show of gas and oil at 825'.	825	P&A
10-88	SENESE 13-23S20E	Pu	Utah Southern Oil Co. #1	Salt Valley	10-23-29	5100?	Kayenta	Paradox	Salt sequence 1570' to total depth.	Salt water 1478-1480' Cph.	3,829	Abd
10-89	NENWNW 32-23S21E	S	King Oil Co. #1	Salt Valley	11-26-53	4870	Paradox	Paradox		Show oil 3294-3358'. Shot with 308 quarts nitroglycerin, but no oil or gas by bailing.	3,550	Abd
10-90	C NWNW 32-23S21E	G	Utah Southern Oil Co. #1	Salt Valley	10-27-32	4870	Paradox	Paradox	Cpp 6120'.	Log is available on photostats. Oil showings from 3387-3436'. Water sands 840-850'.	6,120	P&A
10-91	SWNWNE 36-24S22E	S	Grand River Oil & Gas Co. #1	Castle Creek	1-5-50	3999	Moenkopi	Granite Wash-Rico	Pr 1930'.	Hole left open above 350'. May be used for water.	3,711	Abd
10-92	SWNESE 12-24S23E	Pu	Harry P. Hubbard #1	Onion Creek	5-15-51	4481	Cutler	Paradox Member of Hermosa ?		Entire column was Arkosic in character.	7,955	P&A
10-93	SESE 2-25S20E	S	Great Lakes Carbon Corp. #1	Seven Mile	8-15-46	?	Rico	Paradox			3,655	Abd
10-94	SWSE 12-25S20E	Pu	Columbia Crude Corp. #1	Seven Mile	10-26-38	4700	Rico	Paradox	Salt 2440'.	Only creditable showing of oil was in three feet of sand from 2130-2133'.	4,243	Abd
10-95	NESW 20-25S21E	Pu	Empire Petroleum Co. #1	Moab	7-?-26	4400	San Rafael	?			235	Abd
10-96	NENE 27-25S21E	Pu	Embar Oil Co. #1	Moab	1926	4030	Jurassic	?			300	Abd
10-97	SENW 34-25S21E	Pu	Embar-Big Six Oil Cos. #1	Moab	3-2-28	4000	Hermosa	Paradox		Oil and gas showing at 2380-2420', 2870', 3000', 4303', and 4880'.	5,345	Abd
10-98	SESESE 35-25S21E	P	Great Lakes Carbon Corp. #1	Moab	1-?-43	?	Hermosa	Paradox			3,367	Abd
10-99	NESE 16-25S23E	S	Grand River Oil & Gas Co. Sid Pace #1	Castle Creek	11-?-50	?	Alluvium	?			1,725	Abd
10-100	SENWNW 11-26S19E	Pu	Glen M. Ruby #1	Big Flat	8-22-51	6040	Kayenta	Moenkopi	Rm 928'.	Unable to recover tools due to caving.	1,008	Abd
10-101	SENWNW 11-26S19E	Pu	Glen M. Ruby #1-A	Big Flat	5-26-53	6033	Kayenta	Devonian	Jw 230', Rc 550', Rsh absent, Rm 925', Pcu-Pr 1395', Cphu 2085', Cph-Cpp 4100', Salt 4158-7520', Cpmo 7821' -4" only - Cml 7821', D 8105'.		8,213	Abd

Note: Wells for each county are "spotted" on the accompanying map.

Note: For abbreviated legend data see explanation before tables.